



# UNITED STATES PATENT AND TRADEMARK OFFICE

✓

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,710	04/06/2001	Alexandre El Homsi	5467	5609
7590 Patrick J. O'Shea Samuels, Gauthier & Stevens LLP Suite 3300 225 Franklin Street Boston, MA 02110		01/17/2007	EXAMINER STERRETT, JONATHAN G	
			ART UNIT 3623	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	01/17/2007	PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/828,710	EL HOMSI, ALEXANDRE
	<b>Examiner</b>	<b>Art Unit</b>
	Jonathan G. Sterrett	3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 October 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-6,8-20 and 22-34 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-6,8-20 and 22-34 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### *Summary*

1. This Non-Final Office Action is responsive to applicant's amendment filed October 20, 2006. Currently Claims 1-6, 8-20 and 22-34 are pending.

### *Response to Arguments*

2. The applicant's arguments have been fully considered and are found to be persuasive.
3. The applicant argues on page 16 para 4 that the use of the term 'best matching resource' should not be rejected under 112 2<sup>nd</sup> because of the removal of the terms "super", "parent" and "current".

The examiner respectfully disagrees.

The term 'best' implies there is at least one other resource that the 'best' can be compared to as being better. If there are more than two, then there is a comparison to determine which resource is 'best'. Not only are the claims silent with regards to how this "best" determination is made, but also the specification is unclear how the invention determines a "best" matching resource. Thus, the claim is still indefinite as to how the "best" resource is determined.

4. The applicant maintains their argument on page 17 para 3 that the use of the term "role" in Du 163 is distinct from its use in the present application. However, no further arguments are made in reply to the previous examiner arguments.

The examiner respectfully disagrees and again reiterates his position for the record.

Du 163 teaches in column 12 line 50 that roles are used to "map activities into resources". Further Du 163 teaches in column 12 line 63-67 that roles are resource types for fulfilling workflow requests, i.e. they are roles in the sense that the instant application is using 'roles' for filling workflow requests.

5. The applicant argues on page 17 para 3 that Du does not teach a matrix organizational model.

The examiner respectfully disagrees.

The limitation in Claim 1 cites "identifying in a matrix-based workflow an organizational unit where said resource x belongs". Claim 6 part b cites "to determine workflow routing in a matrix organizational model". Du teaches in column 1 line 47-50 that dynamic resource allocation provides for resource allocation that is independent of business processes. Furthermore Du 163 in Column 6 line 1-5 notes that there are organizational connections that are "horizontal", i.e. not up or down in the hierarchy. This is evidence of a matrix model because the managers associated with the nodes are communicating outside of their hierarchical chain of command, i.e., in a matrix organizational way.

6. The applicant argues that Claim 1 does not address the functionality of claim 7.

Please see the new rejection below (Claim 7 was amended into the limitations of Claim 6).

The examiner notes that official notice was taken on page 8 regarding using iteration. Since the Official Notice was not traversed, it is taken to be admitted prior art.

The examiner notes that official notice was taken on page 9 regarding using hierarchies to organize organizations in tiers. Since the Official Notice was not traversed, it is taken to be admitted prior art.

The examiner notes that official notice was taken on page 10 regarding the internet being utilized by the invention of Du 163. Since the Official Notice was not traversed, it is taken to be admitted prior art.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 1-5** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 1, the limitation is cited 'best matching resource' without positively reciting how the method determines that the matching resource is in fact, the 'best' resource. The use of the term 'best' implies that there is a optimization or comparison step (e.g. 'good, better, best') to determine that the matching resource is in fact, the best one. However, the claim states that a 'best matching resource' is identified without reciting how in fact, the resource is determined to be 'best'.

Claims 2-5 are indefinite at least for the reasons cited above for Claim 1.

### ***Claim Rejections - 35 USC § 101***

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 1-5** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Under the statutory requirement of 35 U.S.C. § 101, a claimed invention must produce a useful, concrete, and tangible result. For a claim to be useful, it must yield a result that is specific, substantial, and credible (MPEP § 2107). A concrete result is one that is substantially repeatable, i.e., it produces substantially the same result over and over again (*In re Swartz*, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000)).

In order to be tangible, a claimed invention must set forth a practical application that generates a real-world result, i.e., the claim must be more than a mere abstraction (*Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77). Additionally, a claim may not preempt abstract ideas, laws of nature or natural phenomena nor may a claim preempt every "substantial practical application" of an abstract idea, law of nature or natural phenomena because it would in practical effect be a patent on the judicial exceptions themselves (*Gottschalk v. Benson*, 409 U.S. 63, 71-72 (1972)). (Please refer to the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" for further explanation of the statutory requirement of 35 U.S.C. § 101.)

Regarding **Claim 1** the claim's preamble states that the claim is for returning a best matching resource. However, none of the cited limitations, taken together or individually claim that an identified resource as returned is tangibly identified, therefore the claim does not provide a **tangible** result. (examiner note: in the case of system or product claims, a tangible rejection can be overcome by making the output of the claims tangible, e.g. being displayed, stored or printed).

Furthermore, regarding **Claim 1**, in addition to above, the claim cites identifying a "best" matching resource. However, these steps would provide an output (i.e. an identified resource) that is substantially different, depending on the individual that is utilizing these steps. Thus, one individual using the claimed invention could realize a substantially different outcome than another individual. Because the claims may be used as such to provide different outcomes, the invention as claimed does not provide

for a result that is substantially repeatable, and therefore does not provide a **concrete** result.

Because **Claim 1** does not provide for a tangible and concrete result, this claim is rejected under 35 USC 101.

**Claims 2-5** depend on **Claim 1**, and are therefore non-statutory under 35 USC 101 for at least the reasons cited above.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 1-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Du US 6,308,163**.

Regarding **Claim 1**, Du teaches:

**a) identifying in a hierarchical matrix-based workflow an organizational unit where resource x belongs,**

Column 2 line 37-39, providing an enterprise-wide view of resources means that resources are identified and allocated throughout and across functional areas (as would be required by a matrix-based workflow).

Column 7 line 46-38, each resource is identified into an organizational unit through mapping by a Line Resource Manager (LRM). This takes place across the enterprise. Note in column 4 line 50-55, Du teaches the resource mapping being done in accordance with the current organizational hierarchy – see Figure 2 for an example of the resource hierarchy.

**b) identifying all hierarchically-superior roles of said role F;**

Column 7 line 33-35, databases identify all roles.

Column 12 line 46-59, knowledge of roles exist at Strategic Resource Manager (SRM) and Enterprise Resource Manager (ERM) levels.

Figure 9, Role hierarchy of resources is identified, including super roles of a given role in hierarchy.

**c) in the case that no hierarchically-superior roles of role F exist, returning x as best matching resource;**

Column 13 line 7-9, connections between virtual nodes and resource types enables the finding of resources – nodes map the hierarchy of roles.

Column 13 line 30-32, RQL, RPL and RDI used to return best matching resource based on criteria and constraints in language, line 46-49, example of programming code and location of 'mexico'.

Column 4 line 55-60, Du searches a hierarchy to determine a best matching resource. – note the hierarchy in column 5 line 49-51 and the discussion about escalating requests up the hierarchy in column 5 line 65- col 6 line 3.

**d) in the case that a hierarchically-superior role of role F exists, iteratively identifying an immediately hierarchically-superior role from said list of hierarchically-superior roles;**

Column 12 line 53-58, nodes map out the hierarchy of roles, including identifying hierarchically superior roles (and inferior ones also) from any role in the resource hierarchy. Note that col 5 line 65- col 6 line 3 teaches an escalation of a resource request up the hierarchy.

Column 13 line 7-9, nodes have resources mapped to them

Figure 6 #164, method uses iteration to navigate role nodes to find resources.

Column 12 line 60-67, Boolean criterion for searches provide criterion to identify roles. Since the hierarchy expands in capability going from roles to parent roles to super roles, criterion to identify roles on the parent level are narrower than used to identify roles on the super level- see column 11, line 45-50.

**e) identifying a role R of the immediately hierarchically-superior role;**

Column 12 line 53-58, nodes map out the hierarchy of roles, including identifying the roles associated with hierarchically superior roles.

**f) identifying in the organizational unit all resources other than resource x, that has role R,**

Column 13 line 7-9, connections between virtual nodes and resource types enables the finding of resources – nodes map the hierarchy of roles with the resources in an organizational unit, see figure 9.

Figure 6 #156, #166, "Find a Resource", method iteratively finds a resource.

**g) in the case that there is at least one identified resource other than resource x that has role R, returning the at least one identified resource as the best matching resource, else;**

column 13 line 60-65, the system can identify other resources through substitution policies that return those other resources as the best matching resource.

**h) in the case that there is not at least one identified resource other than resource x that has role R, identifying all servicing Organizational units for said current role R, and**

Column 14 line 35-40, requests for resources can be pleaded up to the ERM's, which maintains knowledge of all roles in their organization, including for servicing organizations. The ERM can delegate the request up and down to a subordinate organization to the appropriate role. The requests can also traverse the organizational hierarchy to find a resource that can meet the requirement (i.e. the resource has the required role R).

Figure 3, #72, ERM's are linked to allow for communication of requests.

Du teaches a system that maintains a resource hierarchy. This hierarchy has the same structure as an organizational hierarchy.

Du teaches iteration to find appropriate resources (Figure 6 #164) and that finding eligible, available and the least loaded resources is the goal of workflow resource management.

Du does not teach:

- i) repeating steps e-g, until all best matching resources are returned.**

Official Notice is taken that repeating steps in iterative fashion is old and well-known in the art of performing methods.

It would be obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Du, regarding organization of hierarchical resources and roles in a workflow resource management system, to iterate across the hierarchy in order to find resources best matched for an activity, because it would provide an efficient means to locate resources in an organization.

**Regarding Claim 2, Du teaches:**

**wherein in the case that no servicing organizational units are found in step h,  
said method further implementing the following steps:**

- i) escalating the list of hierarchically roles and identifying a new role R;**

Column 14 line 35-40, requests are escalated up from SRM's to ERM's to identify best matching resources for a particular workflow task. See also Figure #2 and #3.

- j) repeating said steps e-i for said new current role R and returning best matching resources, and**

Figure 6 #164, requests can be returned to resource engine for a second attempt to find a resource.

**k) identifying all immediately hierarchically-superior organizational units of the organizational unit and repeating steps e-i with the immediately hierarchically-superior organizational units as the organizational unit and returning best matching resources.**

Column 14 line 35-40, As discussed above, Du teaches here that requests can be escalated up the organization. Figure 3 #68 to #66, requests can be passed to other ERM's also to return the best matching resources.

Regarding **Claim 3**, Du teaches escalating up and across the organization, as discussed above, to identify resources for a particular task and returning those resources as identified for that particular task.

Du does not teach identifying organizational units with a global role to which requests for finding matching resources can be sent to.

Official Notice is taken that enterprises, with hierarchical organizations can be organized in tiers to include a global organization. Examples of this include many well-known multinational corporations with world headquarters and operations in major continents and countries.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Du, to include returning identified resources for a

global organization unit, because it would enable the workflow search for appropriate tasks to be efficiently conducted on a global scale.

Regarding **Claim 4**, Du teaches

**wherein the hierarchical matrix-based workflow is a three-dimensional workflow comprising the following axes:**

**organizational unit, title hierarchy, and functional roles.**

Column 13 line 55-60, Du's resource hierarchy is designed to fulfill workflow requirements – although it contains a hierarchy with the up and down links associated with a typical organizational hierarchy (see Figure 2), it also provides for horizontal functional links to identify appropriate resources (see column 8 line 30-35, resource sharing that is local that crosses the organizational boundaries is a kind of matrix resource sharing).

Column 7 line 14-15, strategic resource manager (SRM) views may be based upon organizational boundaries.

Column 11 line 47-48, title hierarchy exists between, for example an engineer and a programmer and between an engineer and an analyst – see also Figure 8. Title hierarchy also exists between LRM's, SRM's and ERM's – see Figure 2 & 3.

Column 4 line 55-63 – organizational groups represented by ERM's.

Regarding **Claim 5**, Du teaches:

**wherein the method is network enabled,**

Column 2 line 56-60, computer network for running WFMS comprising multiple computers.

Du does not teach:

**the network comprising any of the following: local area network (LAN), wide area network (WAN), Internet, HTTP-based network, or PSTN/PBX network.**

Official Notice is taken that it is old and well known in the art for the computer network taught by Du to include the Internet.

It would have been obvious to one of ordinary skill in the art to modify the teachings of Du, regarding running a WFMS on a computer network, for that computer network to comprise the internet, because it would provide a readily available and efficient way to network computers to accomplish distributed WFMS capability.

12. **Claims 6, 8-20 and 22-34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Du US 6,308,163 in view of Du US 5,826,239.

Regarding **Claim 6**, Du teaches:

**a) one or more databases storing information regarding design elements required for creating an application, definitions of organizational models, and workflow rules;**

Column 10 line 64-65, the process repository is populated by imported process models created by business managers and analysts.

Column 10 line 61-62, WFMS uses at least one repository of business process rules.

Column 10 line 60-61, database of policy and resource schema comprise a definition of organizational models.

**b) a search engine interfacing with said one or more databases and utilizing stored information to determine workflow routing in a matrix organizational model,**

Column 9 line 23-25, resource request received at control engine.

Figure 6 #164, query returned to resource engine to determine resource.

Figure 5 #144 & #146, resource engine contains query processor and discovery model.

Column 11 line 5-6, stored policy rules are consulted in determining abandonment or processing – these policy rules are stored in the database of policy and resource schema (Figure 5 #170).

Column 2 line 37-39, providing an enterprise-wide view of resources means that resources are identified and allocated throughout and across functional areas (as would be required by a matrix-based workflow).

**Wherein the search engine further comprises:**  
**a role extractor identifying all roles associated with said organizational models;**

column 7 line 25-30, all resource types are defined, these resource types are associated with nodes in the organizational models – note column

**a functional link extractor identifying all functional links associated with said organizational model;**

column 6 line 1-5, the system identifies other horizontal links (i.e. that are outside the hierarchy and between functional managers, i.e. the link is a functional one) associated with the organizational model.

**an inherited link extractor identifying all links of hierarchically-superior roles associated with said organizational model, and**

column 8 line 15-20, organizations that are different but share the same geography, i.e. have an inherited link because e.g. they are in the same facility, are identified by the system. Within these organizations, the same organizational hierarchy is defined. The system only identifies where there are two different organizations locally for the purpose of identifying resources that can be easily shared by virtue of being in the same geography.

**a matcher identifying appropriate recipient(s) by matching said workflow requests to said roles in organizational models while traversing a hierarchical tree of said organizational unit, and other organizational units based on said identified functional and inherited links.**

Column 5 line 35-40, the resource engine (i.e. matcher) determines if a resource can be found to satisfy a request. This engine operates with a substitution engine that

uses the rules defined for the defined organizational hierarchy to determine if a request can be fulfilled (i.e. can a matching resource be found).

**c) a router receiving workflow requests, and directing said workflow requests to appropriate recipients based on said search engine determinations; wherein the appropriate recipient(s) may include recipients in other organizational units.**

Figure 5 #122, control engine directs workflow requests to appropriate recipients #129 (see column 9 line 40-42).

Figure 4 #110, Query routing includes for resource requests.

Column 8 line 15-29, recipients for workflow requests may include recipients in other geographies and other independent organizations, due to Du's resource hierarchy – see also Figure 3.

Du does not teach:

**a router polling said one or more databases to retrieve workflow requests.**

Du 5,826,239 teaches:

**a router polling said one or more databases to retrieve workflow requests.**

Column 7 line 55-57, HP OpenPM Database is maintained on server.

Column 7 line 63-67, status information and load information can be queried – line 67—column 8 line 7

Column 10 line 19-21, business objects, defines something active in the business domain – these objects are stored in a database.

Column 10 line 48-52, business activities (tasks) and business objects (resources) are mapped at runtime by the resource manager.

It would have been obvious to one of ordinary skill in the art to combine the teachings of Du US 6,308,163 regarding the hierarchical mapping of resources and roles in a workflow management system, with polling a database to retrieve workflow requests, as taught by Du US 5,826,239, in order to automate and make efficient the mapping of workflow activities to resources at runtime.

**Claim 8** recites limitations already addressed by the rejection of **Claims 6 and 7** above, and is therefore rejected under the same rationale.

Regarding **Claim 9**, Du teaches:

**wherein information regarding said design elements in the hierarchical organizational models is imported in any one of, or a combination of, the following ways:**

**via a local database, via a remote database, imported from an address book or imported from another organizational model.**

Column 10 line 64-66, process repository is populated by imported process models created by business managers and analysts.

Regarding **Claim 10**, Du teaches:

**wherein the method is network enabled,**

Column 2 line 56-60, computer network for running WFMS comprising multiple computers.

Du does not teach:

**the network comprising any of the following: local area network (LAN), wide area network (WAN), Internet, HTTP-based network, or PSTN/PBX network.**

Official Notice is taken that it is old and well known in the art for the computer network taught by Du to include the Internet.

It would have been obvious to one of ordinary skill in the art to modify the teachings of Du, regarding running a WFMS on a computer network, for that computer network to comprise the internet, because it would provide a readily available and efficient way to network computers to accomplish distributed WFMS capability.

Regarding **Claim 11**, Du teaches:

**wherein said search engine is a rules based search engine.**

Column 11 line 5-6, stored policy rules are consulted in determining abandonment or processing – these policy rules are stored in the database of policy and resource schema (Figure 5 #170).

Regarding **Claim 12**, Du teaches:

**wherein said one or more databases with definitions of organization models further comprises definitions of hierarchy, structure and function associated with organization models.**

Figure 5 #170, Policy and Resource schema contains definitions of hierarchy structure and function associated with organization models since it determines workflow routings and resource schema.

Regarding Claim 13, Du 6,308,163 does not teach:

**wherein said system further comprises a statistical analyzer providing a complete statistical analysis of workflow processing including means for tracking workflow cycles by date, event, requestor, or workflow actor.**

Du 5,826,239 teaches:

**wherein said system further comprises a statistical analyzer providing a complete statistical analysis of workflow processing including means for tracking workflow cycles by date, event, requestor, or workflow actor.**

Column 1 line 55-59, collection of statistical data for process and resource bottleneck analysis, flow optimization and workload balancing would include means for tracking workflow cycles by date, event, requestor, or workflow actor.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Du 6,308,163 regarding workflow resource management as discussed above, to include the teachings of Du 5,826,239 regarding

statistical analysis of workflow processing because it would optimize the allocation of resources using a workflow system.

Regarding **Claim 14**, Du teaches:

**wherein said system further comprises an automated delegation system that allows users to delegate tasks for re-routing events for temporary process changes.**

Column 11 line 65—column 12 line 2, requests can be delegated automatically to those below a resource in the hierarchy, including for re-routing events for temporary process changes.

Regarding **Claim 15**, Du 6,308,163 does not teach:

**wherein said router is a JAVA servelet.**

Du 5,826,239 teaches:

**wherein said router is a JAVA servelet.**

Column 10 line 31-36, workflow activities represented by business objects.

Column 10 line 48-52, runtime manager, which is an object, coordinates between business activities and resources.

Du teaches using objects to manage the routing of requests to resources, including but not limited to a Java servelet to manage the routing of requests to resources.

Regarding **Claim 16**, Du 6,308,163 does not teach:

**wherein said workflow rules are stored in a separate database.**

Du 5,826,239 teaches:

**wherein said workflow rules are stored in a separate database.**

column 19 line 19-21, most workflow systems have their own decision making facilities – i.e. rule engines. This makes complicated resource allocation depending on different locations possible, since each resource manager would have their own rule engine (and associated database).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Du 6,308,163, regarding workflow resource management, to include the teachings of Du 5,826,239 regarding workflow rules being stored in a separate database, because it would allow for individual resource managers to have their own resource allocation and request routing based on the specifics of their particular locations.

Regarding **Claim 17**, Du 6,308,163 does not teach:

**wherein said workflow management is externalized from applications created using said information in said one or more databases.**

Du 5,826,239 teaches:

**wherein said workflow management is externalized from applications created using said information in said one or more databases.**

Column 8 line 5-11, interaction with the external world is performed by business object management modules (Figured 2 #30-33).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Du 6,308,163 regarding workflow resource management to include the teachings of Du 5,826,239 regarding externalizing workflow management from applications, because it would provide a way to improve reliability and scalability by distributing the workflow management and applications.

Regarding **Claim 18**, Du teaches:

**wherein said definitions of organizational models further include definitions of functional links that extend said workflow process across organizations without defining hierarchical links.**

Figure 8 shows an example of nodes within Du's workflow resource management approach that include definitions of functional links that extend said workflow process across (and within) organizations without necessarily defining hierarchical links.

Regarding **Claim 19**, Du teaches:

**wherein said search engine follows as many links as**

**needed to resolve said workflow requests by traversing a hierarchical tree of said organizational units in said organizational model, and identifying functional links to other organizations that service said organizational units.**

Column 5 line 28-30, four layers (see figure 4) provide a response query algorithm (i.e. search engine) to map resources to workflow activities.

Figure 10 – a hierarchical tree of organizational units in an organizational model, however this tree can include--Figure 3 resource managers who are local and who have functional links to other organizations, including those that service said organizational units

Column 4 line 55-64 – tree hierarchy, SRM's at same level represent views in different organizations or within different physical boundaries such as a site manager who have elements of the HR function reporting to them at that site.

**Claims 20 and 22-34** recite limitations already addressed by the rejection of **Claims 6 and 8-19** above, and are therefore rejected under the same rationale.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JGS  
JGS 1-6-2007

Ram Jeanty  
Primary Examiner  
Art Unit 3623